

COOLING NOZZLE MOUNTING ARRANGEMENT

Abstract of the Disclosure

A cooling nozzle assembly includes a mounting plate, a pin body and a nozzle tube. The mounting plate has a pin aperture and a fastener aperture. The pin body has a head portion and a shaft portion. The shaft portion of the pin body has a blind bore that extends from an open first end of the shaft portion to the head portion. The shaft portion of the pin body is fitted into the pin aperture of the plate and affixed to the plate. A hole is cross-drilled in the assembly to intersect the blind bore of the shaft portion of the pin body. The nozzle has an interior passage. The nozzle tube is mounted to the plate and pin body assembly by fitting it into the hole. The interior passage is in fluid communication with the blind bore of the pin body. An engine cylinder block includes a cylinder with a piston assembly disposed therein. A mounting surface is provided in the cylinder block for mounting the cooling nozzle assembly proximal to the cylinder. The mounting surface is provided with a pin aperture that intersects with the oil gallery passage of the cylinder block. A fastener aperture is also provided in the mounting surface and is tapped to receive a conventional threaded fastener. The nozzle assembly is mounted to the cylinder block such that the shaft portion of the pin body is disposed in the pin aperture. Thus the blind bore of the shaft portion and the interior passage of the tube are in fluid communication with the oil gallery passage of the cylinder block. The fastener serves both to secure the nozzle assembly to the cylinder block and, in conjunction with the pin body, maintain the radial position of the nozzle assembly in the cylinder block. Accordingly, the nozzle tube is disposed such that the flow of oil is directed to the appropriate areas of the piston.